

55. The system of claim 53 wherein said at least one temperature sensor for sensing a temperature outside the food being cooked is a sensor provided in fixed fashion in the cooking space.

56. The system according to claim 53 wherein a differential temperature evaluating unit is provided in the handle of the sensor.

A2 57. The sensor of claim 53 wherein the sensor is designed to provide sensor signals to an evaluating control unit in the form of a microprocessor.

58. The system according to claim 53 wherein the sensor includes a cable adapted for connecting to a cooking utensil.

REMARKS

The drawing objection by the Examiner is correct by addition of the reference numeral 9 in Fig. 2.

The specification and drawings have been amended to show the airflow sensor 46 in Fig. 1 referred to in original claim 7. There is no new matter since original claim 7 was part of the original specification and describes this airflow sensor of the cooking process sensor.

With respect to the 35 U.S.C. §112, second paragraph objections, the following is noted with respect to each of the following points raised by the Examiner.

Point 1 - The term "parameter" in new claim 31 is not indefinite since this parameter is a parameter associated with at least one of the food being cooked and a cooking utensil. A listing of the parameters of the food being cooked is set forth in dependent claim 39. A listing of the parameters of the cooking utensil is set forth in dependent claim 43.

Point 2 - To clarify, the term "thermal-kinetics" has been replaced with "temperature variations over time of the picked-up temperature values." This

information is used for determining at least some of the parameters of the food being cooked.

During cooking of food in an oven, heat is applied to the outside of the food, and particular via hot air and/or steam, and then penetrates into the inside thereof. The resulting temperature gradient within the food to be cooked is a function of both the penetration depth and the time. The core temperature is a specific food parameter which can be derived from temperatures measured as a function of penetration depth and time. It is the time dependent movement of the temperatures within the food during heating that determines the cooking stage of the food.

Point 3 - The antecedent basis problem has been corrected.

Point 4 - Determined parameters control the cooking process as shown in Fig. 2 wherein the heater element 32, cooling element 34, ventilator 36, moisture introduction unit 38, moisture discharge unit 40, energy supply unit 42, or energy dissipation unit 44 are controlled.

A cooking process is controlled on the basis of, for example, the core temperature as a specific food parameter. The core temperature in turn is determined on the basis of the temperature measured as a function of penetration depth and time.

Point 5 - Sensors arranged spaced apart along a direction of penetration of the cooking process sensor is easily understood by reference to the drawing. It can be seen that temperature sensors in a 21, 22, and 23 are spaced apart and lie on the direction of penetration of the cooking sensor into the food product 1.

Point 6 - The food parameters listed in claim 40 are determined on the basis of the temperatures measured as a function of penetration, depth and time. For example, the core temperature is defined as the lowest temperature within the food,

and the browning as well as the crust forming of the food is defined by the temperature at the surface of the food as well as the moisture at the surface of the food, which can be estimated - for example via the temperature gradient within the food and the temperature in the cooking chamber.

The storage condition of food, the quality of food as well as the hygiene of food all depend on the core temperature. That is, there is a threshold value for the core temperature defining completely cooked food, and it is considered that a completely cooked food does not contain any bacteria and the like.

Point 7 - As to what is intended by "storage condition of the cooking food", "quality of the cooking food", and "hygiene of the cooking food" is recited in claim 40, the following is noted. The storage condition of food, the quality of food as well as the hygiene of food all depend on the core temperature. That is, there is the threshold value for the core temperature determining completely cooked food, and it is considered that a completely cooked food does not contain any bacteria and the like.

Point 8 - The antecedent basis problem has been corrected.

Point 9 - The original specification in claim 7 noted the cooking process sensor picking up airflow. See sensor 46 in amended Fig. 2.

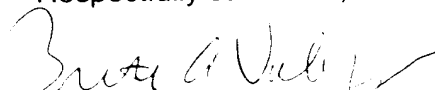
Point 10 - The antecedent basis brought in claim 48 has been corrected.

Point 11 - The set cooking result in claim 49 and the "path of the cooking process" in claim 48 describe a special cooking process selected from a plurality of cooking processes in dependence on certain parameters to obtain a desired cooking result.

Point 12 - Protein content has been eliminated in the claims as a food parameter.

The Examiner rejection claims 1-22 and 29 under 35 U.S.C. §103 as unpatentable over German Patent '496. The '496 patent discloses a temperature sensor probe 2 having temperature sensors I, II, III, IV. Heat distribution is measured. Temperature at different locations in the food and at the surface of the food are measured. Significantly, all four temperature sensors I-IV are all inside the meat. There is no external sensor outside the meat. Also, there is no disclosure of variation of temperature with time. For these reasons, independent claims 31 and 5e both distinguish since they recite utilizing at least one temperature value outside the food being cooked and at least two temperature values picked up at different depths within the food being cooked and wherein at least one parameter of at least one of the food being cooked in a cooking utensil for the food being cooked is determined via temperature variation over time of the pick-up temperature values and utilizing the determined at least one parameter for controlling the cooking process. The '496 patent has no temperature value outside the food being cooked and no temperature variations over time utilized for parameter determination. The dependent claims 32-52 and 54-58 distinguish at least for the reasons the independent claims 31 and 53 distinguish and also by reciting additional features not suggested.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D. C. 20231 on June 28, 2002.

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June 28, 2002

Date

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